

MINUTES OF DOT-AGC BRIDGE DESIGN SUBCOMMITTEE MEETING

The DOT-AGC Joint Bridge Design Subcommittee met on January 10th, 2000. Those in attendance were:

Berry Jenkins	Manager of Highway Heavy Division, Carolinas Branch AGC (Co-Chairman)
Ron Shaw	Lee Construction Company of Carolinas
Kevin Burns	R. E. Burns & Sons Co.
Ron Hancock	Bridge Construction Engineer
Jamey Batts	Soils & Foundations Engineer
Greg Perfetti	Assistant State Bridge Design Engineer
Ricky Keith	Assistant State Bridge Design Engineer
Rob Woodruff	Structure Design Project Engineer
Paul Lambert	Structure Design Project Engineer
Rodger Rochelle	Structure Design Project Design Engineer (Secretary)
Ray Moore	Structure Design Staff Engineer

The following items of business were discussed:

1. The minutes of the November 15, 1999 meeting were accepted.
2. *Pile Tonnage*

Mr. Woodruff provided a brief synopsis of the topic. The issue remains whether or not the cost savings resulting from specifying 60 ton HP 12x53 steel piles offsets the costs related to the bigger hammers and cranes that are required for the higher tonnage. Mr. Rochelle stated that a preliminary investigation was conducted and confirmed that the increase to 60 tons often does not significantly reduce the required number of piles per bent. In fact, on cored slab bridges, particularly with short end bents, the increased tonnage may not reduce the number of piles required. In light of this investigation, Mr. Rochelle stated that a policy in which 50 tons per pile is used for small bridge replacement projects will be further explored. It was emphasized that the FHWA may not support this policy. Mr. Rochelle stated that an internal meeting would be held with the FHWA and an update on the subject would be provided at the next subcommittee meeting.

3. *Vertical Plate Armor*

Mr. Perfetti summarized the Department's position regarding the use of elastomeric concrete and concerns with the South Carolina vertical plate armor detail. Mr. Woodruff stated that the South Carolina details have been examined and that the armor appears expensive with little to address the Department's durability concerns. Mr. Woodruff stated that the Department has not been able to get feedback from South Carolina maintenance personnel yet. Mr. Rochelle stated that cost data for the joint has

been requested from South Carolina. Mr. Shaw stated that the South Carolina detail would be less expensive than the current North Carolina joint detail. Mr. Rochelle stated that it may be too early to ascertain the cost of the armored evazote joint. The bid prices for the first three months of project lettings that include these joints have varied widely. Mr. Shaw concurred that the price may settle in the near future as more suppliers are becoming available. Mr. Perfetti stated that further investigation will be made with the goal of providing a decision at the next meeting as to whether the detail will be pursued.

4. *Causeway Riprap as Slope Protection*

Mr. Rochelle distributed a draft policy memo regarding the use of causeway riprap as permanent slope protection. Mr. Rochelle stated that a plan note would allow the Contractor to recycle causeway riprap and direct the Contractor to the Special Provision. The Special Provision disallows claims due to a resulting underrun in the plan quantity of Class II Riprap for slope protection. Mr. Jenkins, and the Contractors present, confirmed that this draft memo satisfies the original intent of the Contractors. Mr. Shaw inquired as to whether permission would have to be requested in order to exercise this option. Mr. Hancock replied that permission would not be needed unless the placement of causeway riprap would violate permit requirements. Mr. Rochelle stated that this policy would be implemented shortly pending further comments from Mr. Cagle and Mr. Nelson.

5. *CPM Scheduling*

Mr. Hancock initiated a discussion on Critical Path Scheduling. Mr. Hancock stated that the Department is exploring the possibility of requiring CPM Scheduling on a couple of large upcoming projects involving multiple construction phases. Mr. Hancock asked if the Contractors felt it was feasible to submit this schedule with the bid.

Mr. Burns stated that large Contractors often have personnel devoted solely for this type of scheduling, but that it is not practical for the smaller companies. Mr. Shaw stated that it is possible to submit a schedule shortly after being selected as the low bidder; however, requiring a schedule with the bid is not practical. Often the schedule has been visualized prior to bid but not nearly formalized. Mr. Jenkins concurred that a submittal at the time of bid is not possible and in fact may expose the Department in cases where the low bidder has not fully satisfied the schedule submittal requirements. Mr. Jenkins suggested that the schedule be submitted at the Preconstruction Conference. Furthermore, the Department would have to commit considerable resources to truly monitor the continuously evolving schedule. Mr. Shaw stated that at most a crude preliminary schedule could be submitted with the bid with a detailed schedule to follow at the Preconstruction Conference.

Mr. Hancock discussed the potential advantages of requiring a CPM Schedule, including improved communication between the Department and the Contractor and the facilitation of progress report approval. This requirement would allow Construction

personnel to identify controlling operations, thereby reducing claims. Mr. Hancock explained that a draft Special Provision would be developed for further discussion. Mr. Shaw offered that the Army Corps of Engineers, as well as the Florida DOT, seemingly require the submittal of these type of schedules. Mr. Shaw directed Mr. Hancock to the Corps' specifications as a good reference point in the development of the Department's Special Provision.

6. *Working Drawing Submittals to Structure Design*

Mr. Perfetti introduced the topic by stating that the Structure Design Unit had volunteered to produce and implement a pilot program whereby working drawing submittals would essentially bypass the Resident Engineer's office and be submitted directly to the Structure Design Unit.

To this aim, Mr. Lambert distributed a draft Special Provision outlining the submittal procedure and number of copies required for common submittals. The Special Provision would still require that submittals for unusual construction practices or items not specifically mentioned in the Special Provision be submitted through the Resident Engineer's office. Furthermore, the document contains reference to the portions of the contract governing the submittals for each item. Mr. Lambert stated that unless otherwise mentioned in the contract, only two sets of calculations are required with each submittal. Under this program, the submittals will be returned through the Resident Engineer to afford the Resident Engineers to apply their comments to the drawings.

Mr. Perfetti stated that the draft Special Provision would be reviewed, revised accordingly, and presented at the Resident Engineer's Conferences in January and February. Mr. Perfetti further stated that pending comments from these conferences, the Special Provision could become part of contracts as early as the May 2000 letting.

The Contractors present agreed to this program and encouraged the rapid implementation of the Special Provision. Mr. Jenkins will distribute the draft document to Mr. Cagle and Mr. Nelson to solicit their comments.

7. *Other*

i. *DBE Regulations*

Mr. Jenkins alerted the subcommittee that the new DBE regulations are now a part of contracts starting with the January 2000 letting. Several aspects of the USDOT mandated regulations are already controversial and may result in future bid protests.

ii. *Reinforced Bridge Approach Fill*

Mr. Burns inquired as to the reason that reinforced bridge approach fills are administered through the Roadway Plans. Mr. Perfetti stated that the original reason would be recalled. The elimination of Class 2 MS select granular material was also discussed. Mr. Burns emphasized that the disallowance of Class 2 MS can severely

elevate hauling costs for the fill material. A representative of the Soils and Foundations Section will report the rationale for this policy at the next meeting.